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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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10/710,733

07/30/2004

Jeffrey B. Johnson

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4732

30449

7590

09/26/2006

SCHMEISER, OLSEN & WATTS
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EXAMINER

KIK, PHALLAKA

ART UNIT

PAPER NUMBER

2825

DATE MAILED: 09/26/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No. 10/710,733	Applicant(s) JOHNSON ET AL.	
	Examiner Phallaka Kik	Art Unit 2825	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 30 July 2004 and 31 July 2006.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-59 is/are pending in the application.
- 4a) Of the above claim(s) 14-29, 34-39 and 49-59 is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-13, 30-33 and 40-48 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 30 July 2004 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)
Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

1. This Office Action responds to the Election filed on 7/31/2006 and the application filed on 7/30/2004. Claims 1-59 are pending, wherein claims 14-29,34-39,49-59 are withdrawn from consideration as being directed to non-elected invention with traverse.

Election/Restrictions

2. Applicant's election with traverse of group I invention, claims 1-13,30-33,40-48 in the reply filed on 7/31/2006 is acknowledged. The traversal is on the ground(s) that the search perform for both inventions would not be a serious burden to the Examiner, wherein the subject matter of all claims 1-59 is sufficiently related that a thorough search for the subject matter of any one group of claims would encompass a search for the subject matter of the remaining claims.. This is not found persuasive because although the Examiner agrees that the subject matter are related, the search for group II invention, claims 14-29,34-39,49-59 is not required in the search for group I invention, claims 1-13,30-33,38-48 because there are more limitations in group II invention that require additional search to determine patentability, wherein a thorough search would be required in several patent and non-patent databases such as USPAT, USGPUB, JPO, EPO, IBM TDB, Derwent, IEE/IEEE Xplore, which would therefore incur serious burdens to the Examiner.

The requirement is still deemed proper and is therefore made FINAL.

3. **Claims 14-29,34-39,49-59** are withdrawn from further consideration pursuant to 37 CFR 1.142(b), as being drawn to a nonelected invention, there being no allowable

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generic or linking claim. Applicant timely traversed the restriction (election) requirement in the reply filed on 7/31/2006.

4. This application contains claims drawn to an invention nonelected with traverse in Paper No. 7/31/2006. A complete reply to the final rejection must include cancellation of nonelected claims or other appropriate action (37 CFR 1.144) See MPEP § 821.01.

Applicant is reminded that upon the cancellation of claims to a non-elected invention, the inventorship must be amended in compliance with 37 CFR 1.48(b) if one or more of the currently named inventors is no longer an inventor of at least one claim remaining in the application. Any amendment of inventorship must be accompanied by a request under 37 CFR 1.48(b) and by the fee required under 37 CFR 1.17(i).

Claim Rejections - 35 USC § 101

5. 35 U.S.C. 101 reads as follows:

Whoever invents or discovers any new and useful process, machine, manufacture, or composition of matter, or any new and useful improvement thereof, may obtain a patent therefor, subject to the conditions and requirements of this title.

6. **Claims 1-13,30-33,40-48** are rejected under 35 U.S.C. 101 because the claimed invention lacks patentable utility, wherein the claims are directed to mathematical expressions without having practical application (i.e., the characteristics modeling is not being applied to any system/method so as to produce a useful, concrete, tangible result) (see *State Street*, 149 F. 3d at 1373-74; *Wamerdam*, 33 F. 3d at 1360, 31 USPQ2d at 1759). In addition, the steps of providing as recited in claims 1,7-13,30 does not cause the method/program product to do anything (i.e., does not model the characteristics as recited in the preamble). Furthermore, although claims 10-12,46-48 further define the

"characteristics" as being as electrical characteristics, including denoting capacitance at a node of the domain, and voltage applied at the node, the claims as a whole are still directed to mathematical expressions without having practical application as discussed above, since they failed to produce a useful, concrete, tangible result.

7. **Claims 40-48** are also rejected under 35 U.S.C. 101 because the claimed invention is directed to non-statutory subject matter, wherein the "model" is not directed to any one of the statutory classes invention (i.e., machine, process, manufacture or composition of matter) but is merely directed to a data structure per se, wherein data structure per se not claimed as embodied in computer-readable media are descriptive material per se and are not statutory because they are not capable of causing functional change in the computer (see *Wamerdam*, 33 F.3d at 1361, 31 USPQ2d at 1760). In order to be statutory, the claimed data structures must define any structural and functional interrelationships between the data structure and other claimed aspect of the invention which permit the data structure's functionality to be realized.

Claim Rejections - 35 USC § 112

8. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

9. **Claims 1-13,30-33** are rejected under 35 U.S.C. 112, second paragraph, as being incomplete for omitting essential elements/steps/structural cooperative relationships of elements, such omission amounting to a gap between the steps. See MPEP § 2172.01. The omitted elements/steps/structural cooperative relationships of

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elements are: how the characteristics that is distributed within the domain are modeled, as recited in the preamble of the claims, since the steps of the claims merely "provides" the base equation, the probability density function, and the subsidiary equations, without actually generating the model of the characteristics, based in some ways on the recited steps.

Claim Objections

10. **Claims 1-13,30-33,40-48** are objected to because of the following informalities:

As per **claim 1**, "the form" (line 6) should be --a form--; "the probability" (line 10) should be --a probability-- for proper antecedent basis.

As per **claim 30**, "the form" (line 11) should be --a form--; "the probability" (line 15) should be --a probability-- for proper antecedent basis.

As per **claims 31-32**, --wherein said method-- should be inserted before "further" (line 1) to clearly identify that structural/functional relationship among the elements of the claims.

As per **claim 40**, "the form" (lines 4-5) should be --a form--; "the probability" (lines 9-10) should be --a probability-- for proper antecedent basis.

As per **claims 2-13,31-33,41-48**, the claims are also objected to for incorporating the above errors into the respective claims by claims dependency.

Appropriate correction is required.

Conclusion

11. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. Therefore, Applicant is requested herein to consider them carefully in response to this Office Action.

12. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Phallaka Kik whose telephone number is 571-272-1895. The examiner can normally be reached on Monday-Thursday, 8:30AM-7PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Jack Chiang can be reached on 571-272-7483. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

Any response to this action should be mailed to:

Commissioner for Patents

P. O. Box 1450

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Alexandria, VA 22313-1450

or faxed to:

571-273-8300

A handwritten signature in black ink, appearing to read "Phallaka Kik". The signature is fluid and cursive, with the first name "Phallaka" being more prominent than the last name "Kik".

Phallaka Kik

Primary Examiner

September 17, 2006